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THE RISE OF THE PROTESTANT MEN.

There is many a man of the Protestant clan
Who would follow his CHIEF to the field
Resolv'd to obey Him or fall at His side —
For a Christ-i-an never can yield.
Hear ye the sound of the gathering thunder
Booming o'er mountain and glen?
'Tis the CHIEF of the clan who has marshall'd each man—
'Tis the Rise of the Protestant men!

How firmly they walk! For each Christ-i-an knows
Though he trod on the heather no more
There's a land to receive him — a wonderful land
That his Master has enter'd before.
Hear ye the boom of the gathering thunder
Rolling o'er mountain and glen! —
'Tis the CHIEF of the clan who has marshall'd each man—
'Tis the Rise of the Protestant men!

His hour has arisen! His light's on their path —
The path of the brave and the true!
And their spirits are high, for His Presence inspires
Them with courage to dare and to do! —
Hear ye the boom of the gathering thunders
Pealing o'er mountain and plain! —
'Tis the CHIEF of the clan who has marshall'd each man —
'Tis the Rise of the Protestant men!

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DEMONSTRATED.

John Thomson

GLASGOW,

1885.

Preliminary Advertisement published in 187-

III.

There is now in preparation,
With a view to publication,
A perfect demonstration
Of the Secret of the Nile
That has baffled all the sages
From the earliest of the ages
In the long historic pages
Of this planetary isle.

It is strange, but do not flout it,
For it's meet that one should shout it
Ere the world know all about it,
This Secret of the Nile,
That has baffled all the sages
From the earliest of the ages
In the dim historic pages
Of this planetary isle.

It was found by observation
In the distant Scottish nation,
Shall I say — by infiltration
To the spirit of a "coon"
From one who tracked its windings,
But failed to see its blindings,
And came not with his findings
From the Mountains of the Moon?

THE SECRET OF THE NILE.

AFRICA, as a continent, has a peculiar topography. River-beds in which run no rivers, river-beds that suddenly become filled with clear water teeming with fishes, rivers that cease to run, or dry up in the sands, rivers whose inundations are almost astronomical in their recurrence, a river the source of which is mysterious, or at least, has been the puzzle and despair of ages, are features of topography unknown for the most part to the other continents.

To the mysterious inundation, and equally mysterious source of its most famous river THE NILE, the investigations of ages have been directed, hitherto however with only partial success. "The question of the source of the Nile which was agitated in the age of the Ptolemies has not yet been solved; and although 2000 years have elapsed since Eratosthenes published his conjectures as to the origin of the principal branch, we possess not more satisfactory knowledge on that particular point than was enjoyed in his days by the philosophers of Alexandria. The repeated failures, which had already attended the various attempts to discover its fountains, convinced the geographers of Greece and Rome that success was impossible, and that it was the will of the gods to conceal from all generations this great secret of nature. Homer, in language sufficiently ambiguous, describes it as a stream descending from heaven. Herodotus made inquiry with regard to its commence-

-ment, but soon saw reason to relinquish the attempt as altogether fi
Alexander the Great and Ptolemy Philadelphus engaged in the same u
taking, and despatched persons well qualified by their knowledge fo
arduous task, but who, nevertheless, like the great father of history
travelled and inquired in vain. Pomponius Mela was doubtful
it did not rise in the country of the Antipodes. Pliny traced it in
-nation to a mountain in the Lower Mauritania; while Euthemenes
of opinion that it proceeded from the borders of the Atlantic, and p
ted through the heart of Africa, dividing it into two continents.
seems to have favoured an hypothesis, which also found supporters o
er period, that the Nile proceeded from the East, and might be ident
with one of the great rivers of Asia. Lucan indulges in his usua
-ticism, and appears satisfied that, by a decree of the Fates, the glo
no nation will ever be increased by drawing aside the veil in
the Naiads of this mighty stream have been pleased to conceal
-selves. The conceptions of Lucretius, the poet of physical natur
perhaps more correct, although obviously founded upon a
-ate conjecture rather than derived from actual research.

"While rolls the Nile adverse,
Full from the South, from realms of torrid heat,—
Haunts of the Ethiop tribes; yet far beyond,
First bubbling distant o'er the burning line."

Maps published in Amsterdam in 1688 place the sources of
in 10° or 12° south latitude, and the greatest African traveller of mo
times—LIVINGSTON—does the same, writing thus:—"I have ascer
that the watershed of the Nile is a broad upland between 10° and 1
latitude, at 4000 to 5000 feet above the level of the sea. The mounta

the watershed are probably what Ptolemy for reasons now unknown called "The Mountains of the Moon." From their bases I found that the springs of the Nile do unquestionably arise. This is just what Ptolemy put down, and is true geography. We must accept the fountains, and nobody but Philistines will reject the mountains, though we cannot conjecture the reasons for the name." This is the most credible information we have at the present time regarding the source of the Nile. Confirmation or proof is however still desirable, the more especially as by Livingstone's discovery little or no additional light is thrown upon that twin-mystery — the Annual Inundation, concerning which, the author of "Egypt, ancient and modern" quoted above (page 1) thus writes:

"It is impossible to find any where among terrestrial objects a more striking instance of the stability of the laws of nature than the periodical rise and fall of this mighty river. We know, by the testimony of the ancients, that its inundations have been the same, with respect at least to their season and duration, for thousands of years. The rise of the water is so regular, that the inhabitants of Lower Egypt look for its arrival with the same degree of confidence as if the blessings which it brings along with it depended upon causes within their own control. Travellers inform us that in ordinary years, it is not till the first week in July the rise can be distinctly marked. At a much earlier part of the season, it is true, there is a temporary swell in the current, occasioned by partial rains which fall within the tropics soon after the vernal equinox; though the real inundation does not commence till the period already mentioned, and even then very imperceptibly. By the middle of August it has

reached half its elevation, but it is not at the highest till towar
last days of September. It then continues stationary about two w
when it begins gradually to subside. By the 10th of November it
fallen one-half, from which period it diminishes very slowly till t
15th or 16th of the following May, when it is understood to have r
-ed its lowest ebb. During the increase, the water first acquire
green colour, of rather a deep tint; and after 30 or 40 days, t
succeeded by a brownish red."

Regarding ~~this~~ the cause of this remarkable annual pheno
many theories have been put forward, but nothing better, so fa
the present writer is aware, than that given by Charles Blount in
as follows: "Diodorus, Seneca, Strabo, and others upon good gr
believed that the inundation of Nilus proceeded from the ra
Æthiopia, and the mighty source of waters falling towards t
fountains thereof. For this inundation happeneth when it is
with the Æthiopians, where, although they have no cold winter
Sun being no further removed from them in Cancer, than to
Taurus) yet is the fervour of the air so well remitted, as it a
a sufficient generation of vapours, and plenty of showers ens
thereon. This theory of the ancients is likewise since confirmed by ex
of the moderns, and is undoubtedly the most rational account that
en thereof. Thales attributed the overflow of the Nile to the Etesian
which are easterly winds that blow yearly about the dog-days
this opinion was Pliny, Ammianus Marcellinus, and Lucretius,

"Nilus in aestate crescit, &c"

for the increase and inundation of Nile, beginning at the

-mer solstice, and this river running directly from south to north, from one tropic to another, which is just the middle part of the earth, when it comes to incline its axis and return the antarctic part to the sun, the stream of this river, which is contrary to that motion, waxes slower; and being moreover augmented by the con-tinual rains of summer that descend from Æthiopia, swells and overflows the plains of Egypt: which made many of the ancients imagine that the Etesian winds blew against the stream at that time, and forced the water back upon themselves. But Scaliger rejects this as a childish notion. Democritus thought that the Etesian winds, blow-ing the snow from the north parts of Ethiopia occasioned the in-crease of the Nile. Herodotus (as we find in Diodorus) imputed it to the very nature of the river, which as it sunk in the winter, when the sun went away into Lybia, so did it rise again in the summer at the sun's return. Ephorus saith it was the sweat of the land, which evaporating with the heat of the summer, occasioned the rise of the water. These and many other opinions there are concerning the Nile's overflowing, of all which, the first I here mentioned is most generally received and approved, viz, that it proceeds from the Æthiopian rains". The Two First Books of PHILOSTRATUS' life of Apollonius Tyanæus P.202.

To reconcile this theory - shrewd as it is - with the astronomical precision of the annual inundation, it will still be necessary to suppose that the rain falls in Africa with a regularity unknown to all other parts of the world—more, doubtless, than should be admitted.

A somewhat similar degree of mystery respecting their sources

and periodical inundations attaches likewise to the other important rivers of the continent, viz: The Niger, The Congo, and The Zambezi.

SOLUTION.

"ALL the rivers of the African interior were made by Dr. LIVINGSTONE to swell a circle of waters which ultimately flowed eastward as the Great Zambesi, of which he boasted the discovery." This great circle of waters seems to the writer to be the terrestrial source of all the principal African rivers; and the Secret of all the peculiar phenomena he takes to be the following:—viz. the Everchanging Relations of — LOCAL POSITION and the LINE OF GRAVITY.—

As a consequence of the axis of the earth being inclined at an angle of some 23 degrees to the plane of its orbit round the sun, the "line of gravity" is constantly changing, with the result that from the Vernal Equinox to Midsummer of the Northern Hemisphere, the Southern Pole and Hemisphere is gradually elevated, or, the Northern Hemisphere, overhanging the sun, is depressed. This being so, the great Lake System of Africa, situated about the Equator from 8° to 10° South to a few degrees North Latitude, is at its southern end raised all the time from March 20 to June 20, the overflow therefrom passing down the Nile and becoming perceptible in Egypt 3 months later, the inundation continuing for exactly 3 months, then like the sun at midsummer almost stationary for 2 weeks, and then like the sun gradually retiring. The astronomical regularity of the annual inundation is thus accounted for, and

It seems to the writer that the unusually contradicto accounts of African travellers arise from their visiting same localities at different seasons of the year, as in the above narrated by Livingstone. This also may explain "t most intelligent natives and traders saying the water ran Tanganyka instead of out of it as Livingstone's barometer to it must do. See Appendix., also of Stanley's finding an i which the natives did not call an island, he visiting it when rounded; with other anomalies of African travel and topogr

The half-yearly rise on the Congo is explained by the s great Lake System thus:— At and about the time of the Equ the surplus water going neither north to the Nile and Ni nor south to the Zambesi, must tend elsewhere, and as no s river goes eastward, a half-yearly inundation should be on the Congo. Accordingly we read "Chief discovery of the ex to explore the river Zaire, usually called The Congo in South Afric 1816, under the command of Captn. J.K. Tuckey, RN. " Congo. 5° S 17 Sept. Extraordinary quiet rise of the river shews it I think to chiefly from some lake which had received almost the whole of i er from the north of the line. The commencement of its rise was fir served above Yellala (5°N.) on the 1st September; on the 17th of Se ber at Tall Trees it had risen seven feet, but the velocity was not all encreased". P. 223. Again, "Combining my observations wi information I have bee able to collect from the natives, vag trifling as it is, I cannot help thinking that the Zaire will b found to issue from some large lake, or chain of lakes, com

-bly to the northward of the line". P. 343. "Native account is that it rises in a great marsh 2° N. 17° E." Later travellers however assert that its principal supply comes from the south of the line, while the river itself falls into the sea in 6° S. with a breadth of 10 miles, and with such volume as to remain fresh 13 miles out — a volume of water quite similar to that of the Zambesi or the Nile, and so far as our information goes, having a half-yearly inundation at the seasons when the Lake-System overflow tends least to either of these rivers of opposite hemispheres.

The writer has now proved to his own present satisfaction that the Nile rises in the Southern Hemisphere; that it is connected with "vast lakes most interesting from their large outflowings which explain" the quantity of water that goes to form its annual inundation. He has explained the mysterious river-beds suddenly becoming filled with clear water containing fishes; the cause of the Niger or some of its branches drying up in the sands; the reason of the extraordinary rise of the Zambesi in the months directly opposite (or nearly so) to the Flood season in the Nile; and the cause of the half-yearly quiet though great rise on the Congo at the seasons intermediate to those of the Nile and Zambesi. He has not at hand data to establish the spring rise on the Congo, but as it is reported to have a half-yearly flood, the date must be in March or April, since the autumn one begins in September. Having solved all these problems astronomically on the theory of a great Central Water Basin, accepted by Livingstone, Murchison, &c, he thinks it safe to claim the same as THE CAUSE OF THE NILE'S INUNDATION.

So Homer of all the ancients appears to have come nearest the true source of the Nile, in supposing it came from heaven; and Ptolemy was not perhaps far astray when he called the springs of the Nile the "Mountains of the Moon".

We have not hitherto alluded to the Wadies (Wadys) or dry River-beds never now filled with water. These may be explained by reference to the Mississippi in North America whose waters breaking through its banks never return to the same channel, in which respect it is supposed to be unique; but we presume the African Wadies are from the same cause, viz: a lake-pressure above,-varying according to the years, some with little rain, others with much,-differing from other rivers by having a lake system at their head. This we take to be the secret of the Mississippi, and our Key to the Nile and African Hydrography may also explain the principal phenomena of the Great-Lake-System of North America including the Mississippi and St. Lawrence-perhaps also the enormous ice bergs in the North-Atlantic,-flooded rivers falling to the north and forming them.

Have we not, in thus solving the Nile problem, demonstrated to SENSE that the Newtonian theory is correct and "down to the sun" the correct expression, according to ordinary ideas of "up" and "down"? If so, astronomers will henceforth cease, (as has sometimes been done), to represent in diagrams the north pole of the earth elevated at Midsummer-of-the-Northern-Hemisphere.

In saying this, the writer is quite aware that he is at the same time promulgating a new and important doctrine of meteorology and seismology.

APPENDIX.

"Many a weary foot I trod ere I got a clear idea of the drainage of the Great Nile Valley. The most intelligent natives and traders thought that all the rivers of the upper part of that valley flowed into Tanganyka. But the Barometers told me that to do so the water must flow uphill. The rivers and lakes all converge into the trough of the Valley, which is a full inch of the Barometer lower than the upper Tanganyka." Livingstone

"The Kalahari desert covers a space of country extending from the Orange river in the south, latitude 29° to Lake Nyami in the north, and from about 24° east longitude to near the west coast * * * It is intersected by dry water courses, which rarely contain any water, although at no distant period they were the channels by which the superabundant waters caused by the rains farther north found their way to some parent stream, fertilizing the country in their passage" Life and Explorations of Dr. Livingstone. Adam & Co. P. 34.

END.

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